



Water-Data Report 2010

01382500 PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, NJ

PASSAIC RIVER BASIN

LOCATION.--Lat 41°01'06", long 74°24'04" referenced to North American Datum of 1983, West Milford Township, Passaic County, NJ, Hydrologic Unit 02030103, on left bank 15 ft downstream from culvert at crossover between northbound and southbound lanes on State Route 23, 1,000 ft downstream from abandoned Macopin Intake Dam, 0.6 mi downstream from Macopin River, and 2.8 mi northwest of Butler.

DRAINAGE AREA.--63.7 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--January 1898 to March 1990, September 1992 to current year. Monthly discharge only for some periods, published in WSP 1302. Records for January 1892 to December 1897, published in WSP 541, have been found to be unreliable therefore should not be used.

GAGE.--Water-stage recorder. Datum of gage is 549.17 ft above NGVD of 1929. Prior to May 22, 1970, at site just upstream from Macopin Intake Dam, at datum 34.38 ft higher (revised). May 22, 1970 to March 5, 1990, at site just upstream from Macopin Intake Dam, at datum 20.83 ft higher.

COOPERATION.--Gage-height record collected in cooperation with the Department of Public Affairs, Division of Water Supply, City of Newark. Prior to May 22, 1970, discharge figures provided by city of Newark.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Flow regulated by Canistear (see 01382100), Oak Ridge (see 01382200), Clinton (see 01382300), and Charlotteburg (see 01382380) Reservoirs, and Echo Lake (see 01382400). Water diverted at Charlotteburg Reservoir for municipal supply of city of Newark (see 01382370). Several measurements of water temperature were made during the year. Satellite telemetry at station.

01382500 PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, NJ—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES
[*e*, estimated]

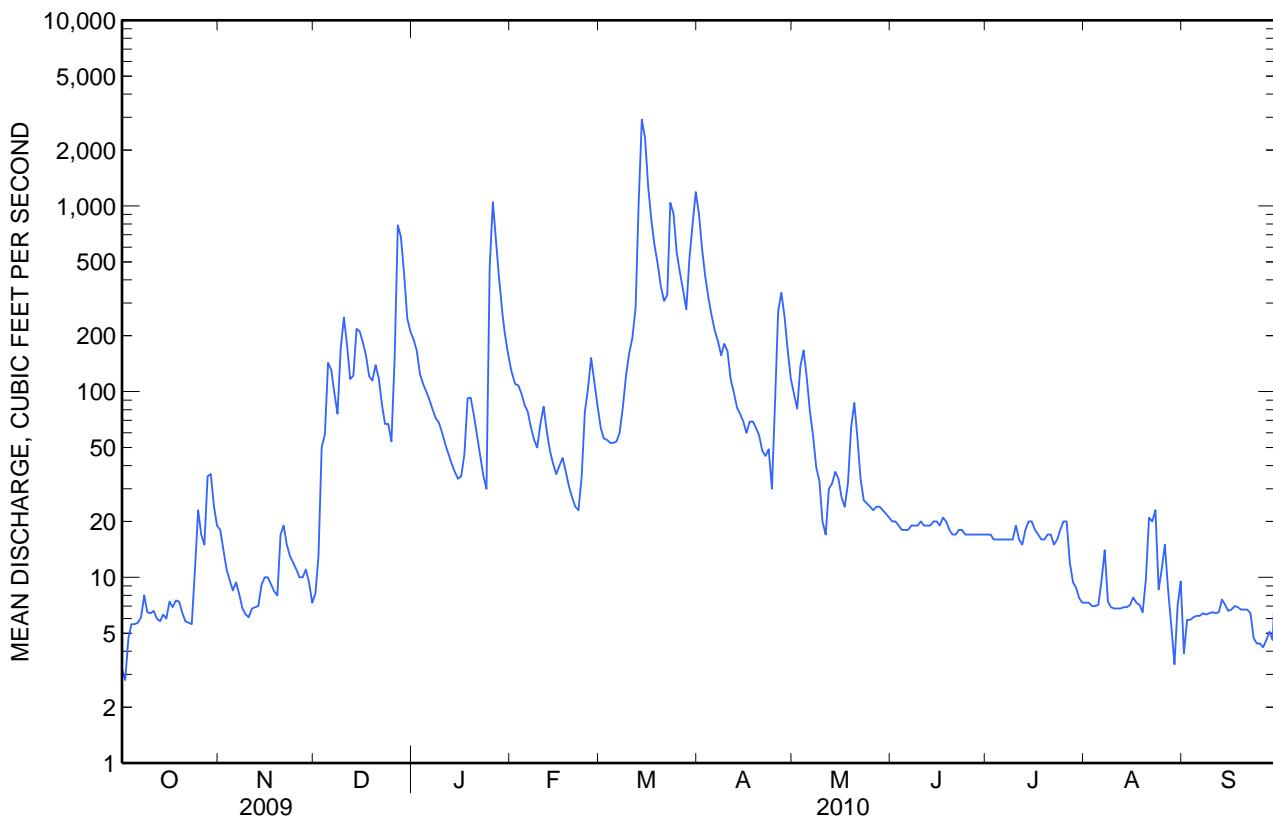
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3.2	18	8.2	191	126	64	907	97	20	17	7.3	3.9
2	2.8	14	13	167	110	56	583	81	20	17	7.3	5.9
3	4.7	11	50	e125	108	55	419	137	19	16	7.0	5.9
4	5.6	9.6	59	e110	98	53	321	167	18	16	7.0	6.1
5	5.6	8.5	143	e100	85	53	257	121	18	16	7.1	6.2
6	5.7	9.4	131	e90	78	54	213	79	18	16	9.6	6.2
7	6.1	8.1	99	e80	64	60	187	58	19	16	14	6.4
8	8.0	6.8	76	e72	55	82	157	39	19	16	7.4	6.3
9	6.5	6.3	171	e68	50	122	181	33	19	16	6.9	6.4
10	6.4	6.1	251	e60	67	161	166	20	20	19	6.8	6.5
11	6.6	6.8	177	52	83	195	117	17	19	16	6.8	6.4
12	6.0	6.9	117	46	61	283	99	30	19	15	6.8	6.5
13	5.8	7.0	122	41	48	1,030	82	32	19	18	6.9	7.6
14	6.3	9.1	218	37	41	e2,920	76	37	20	20	6.9	7.1
15	6.0	10	211	34	36	e2,320	69	34	20	20	7.1	6.6
16	7.4	10	184	35	40	e1,260	60	27	19	18	7.8	6.7
17	6.9	9.2	156	46	44	830	69	24	21	17	7.3	7.0
18	7.5	8.4	121	92	37	617	69	32	20	16	7.1	6.9
19	7.4	8.0	115	93	31	488	64	64	18	16	6.5	6.7
20	6.5	17	139	75	27	368	58	87	17	17	9.7	6.7
21	5.8	19	118	58	24	308	48	57	17	17	21	6.7
22	5.7	15	e85	45	23	333	45	34	18	15	20	6.4
23	5.6	13	e67	35	35	1,040	49	26	18	16	23	4.7
24	11	12	67	30	78	910	30	25	17	18	8.6	4.4
25	23	11	54	467	103	561	85	24	17	20	11	4.4
26	17	10	152	1,050	152	439	271	23	17	20	15	4.2
27	15	10	787	642	113	351	341	24	17	12	8.6	4.6
28	35	11	684	395	84	278	253	24	17	9.4	5.5	5.1
29	36	9.4	433	268	---	516	166	23	17	8.8	3.4	4.6
30	24	7.3	248	195	---	793	118	22	17	7.7	7.1	12
31	19	---	210	152	---	1,190	---	21	---	7.3	9.5	---
Total	318.1	307.9	5,466.2	4,951	1,901	17,790	5,560	1,519	554	489.2	286.0	185.1
Mean	10.3	10.3	176	160	67.9	574	185	49.0	18.5	15.8	9.23	6.17
Max	36	19	787	1,050	152	2,920	907	167	21	20	23	12
Min	2.8	6.1	8.2	30	23	53	30	17	17	7.3	3.4	3.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	19.2	35.7	49.7	48.4	53.6	109	131	64.8	35.3	18.1	14.6	19.1
Max	288	309	357	319	281	574	506	263	360	238	228	211
(WY)	(1956)	(1928)	(1997)	(2006)	(2008)	(2010)	(1983)	(1989)	(1972)	(1938)	(1955)	(1960)
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1929)	(1929)	(1929)	(1931)	(1930)	(1965)	(1950)	(1954)	(1944)	(1923)	(1923)	(1929)

01382500 PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, NJ—Continued**SUMMARY STATISTICS**

	Calendar Year 2009	Water Year 2010		Water Years 1923 - 2010	
Annual total	19,509.4		39,327.5		
Annual mean	53.5		108		49.7
Highest annual mean				109	1952
Lowest annual mean				0.12	1954
Highest daily mean	787	Dec 27	^a 2,920	Mar 14	3,170 Apr 6, 1984
Lowest daily mean	2.8	Oct 2	2.8	Oct 2	0.00 Oct 1, 1922
Annual seven-day minimum	4.5	Sep 29	4.6	Sep 23	0.00 Oct 18, 1922
Maximum peak flow			^a 3,110	Mar 14	^b 6,100 Oct 10, 1903
Maximum peak stage			^a 7.50	Mar 14	^b 17.40 Oct 10, 1903
10 percent exceeds	141		252		149
50 percent exceeds	22		21		6.0
90 percent exceeds	6.1		6.4		0.00

^a Estimated.^b Since 1898, site and datum then in use.

01382500 PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, NJ—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1924, 1962-69, 1973-79, 1991 to current year.

PERIOD OF DAILY RECORD.--

DISSOLVED OXYGEN: July 2001.

DISSOLVED OXYGEN, PERCENT OF SATURATION: July 2001.

SPECIFIC CONDUCTANCE: July 2001.

WATER TEMPERATURE: July 2001, July 2009 to current year.

INSTRUMENTATION.--Electronic data logger with integral water temperature probe since July 2009. Water temperature measurements, in degrees Celsius, recorded at 15-minute intervals.

REMARKS.--Cooperative Network Site Descriptor: Watershed Integrator, NJ Department of Environmental Protection Watershed Management Area 3.

Gap in continuous daily record due to loss of in-stream sensor.

The accuracy of continuous water-quality data is routinely verified through inspections for fouling and calibration drift. The New Jersey Water Science Center requires that either constant or prorated adjustments be made to the continuous water-quality record when the difference between a sensor's response and a known value exceeds the following criteria: Water Temperature, 0.2 degrees Celsius (+ or -). If the difference between a sensor's response and a known value is within specified criteria, the data are considered to be reliable and are not adjusted. Data from the following periods were adjusted - none.

COOPERATION.--Physical measurements and samples for laboratory analyses on Nov 16, Feb 3, Jun 2, and Sep 2 were provided by personnel of the NJ Department of Environmental Protection. Determinations of dissolved ammonia, dissolved orthophosphate, and suspended residue were performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory. Continuous records collected in cooperation with the City of Newark.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 28.1°C, Aug 18, 2009; minimum, -0.2°C, Jan 10, 2010.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 25.5°C, Aug 5, 11; minimum, -0.2°C, Jan 10.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 1 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Sample start time	Barometric pressure, mm Hg (00025)	Temper- ture, air, °C (00020)	Absorbance, UV, organic		Discharge, instantaneous, ft ³ /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)
				UV, 254 nm, 1 cm path length, water, filtered, units per centimeter (50624)	280 nm, 1 cm path length, water, filtered, units per centimeter (61726)				
11-16-2009	1030	750	19.5	.185	.140	10	9.9	88	7.7
02-03-2010	0915	749	2.5	.131	.101	110	12.4	90	7.5
06-02-2010	0855	746	23.0	.113	.087	20	7.8	85	7.5
09-02-2010	1000	749	28.2	.171	.139	5.7	8.9	92	7.5

01382500 PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 2 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Turbidity, water, unfiltered, broad band light source			Dissolved solids,						
	Specific conduc- tance, water, unfiltered, µS/cm at 25 °C (00095)	Tempera- ture, water, unfiltered, °C (00010)	including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	Dissolved solids detectors at multiple angles	Dried at 180 °C, water, filtered,	sum of constit- uents, milligrams per liter (70300)	Hardness, water, mg/L as CaCO ₃ (00900)	Suspended solids, water, unfiltered, mg/L (00530)	Calcium, water, filtered, mg/L (00915)	Magne- sium, water, filtered, mg/L (00925)
11-16-2009	249	10.3	1.2	137	E 127	54.8	< 1	13.8	4.96	
02-03-2010	157	1.9	2.0	100	79	30.4	5	7.34	2.94	
06-02-2010	174	19.6	2.0	96	E 89	39.7	2	10.0	3.55	
09-02-2010	170	17.0	7.0	103	E 91	40.9	3	10.2	3.75	

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 3 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	ANC, water, unfiltered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as water, filtered, CaCO ₃ (90410)						Carbon (inorganic plus organic), suspended sediment, total, mg/L (00694)			Inorganic Chloride, water, mg/L (00940)	Fluoride, water, mg/L (00950)	Inorganic carbon, suspended sediment, total, mg/L (00688)	Silica, water, filtered, mg/L as SiO ₂ (00955)	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)
	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)													
11-16-2009	1.45	25.0	35	.20	46.1	E .04	< .06	6.2	7.00	.29					
02-03-2010	.62	14.1	23	.23	26.8	< .08	< .06	6.2	6.96	.18					
06-02-2010	.61	15.9	28	.35	30.2	E .08	< .06	4.5	6.59	.21					
09-02-2010	.68	16.0	31	.24	28.0	E .06	< .06	6.7	5.68	.23					

01382500 PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 4 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Orthophos- phate, water, filtered, mg/L as P (00671)	Particulate nitrogen, suspended in water, mg/L (49570)	Phosphorus, water, filtered, as P (00666)	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, filtered, mg/L (00602)	Total nitrogen, water, unfiltered, mg/L (00600)	Organic carbon, suspended sediment, mg/L (00689)
11-16-2009	.017	.16	E .007	.04	.009	.013	.45	.49	.20
02-03-2010	.027	.16	< .010	.04	< .008	.015	.33	.38	.23
06-02-2010	.016	.13	--	.06	E .007	.019	.34	.40	.35
09-02-2010	.081	.17	--	.04	E .007	.013	.40	.43	.24

WATER-QUALITY DATA
WATER YEAR OCTOBER
2009 TO SEPTEMBER
2010

Part 5 of 5

[%, percent; ANC, acid
neutralizing capacity;
CaCO₃, calcium carbonate;
N, nitrogen; NTRU,
nephelometric turbidity
ratio unit; P, phosphorus;
SiO₂, silicon dioxide; cm,
centimeter; ft³/s, cubic
feet per second; mg/L,
milligrams per liter; mm
Hg, millimeters of
mercury; nm, nanometers;
°C, degrees Celsius;
µS/cm, microsiemens per
centimeter; <, less than; E,
estimated]

Date	Organic carbon, water, filtered, mg/L (00681)
11-16-2009	5.0
02-03-2010	3.3
06-02-2010	3.4
09-02-2010	2.7

01382500 PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, NJ—Continued
TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	
October				November				December				January	
1	12.8	11.2	12.1	13.1	10.9	12.2	6.2	5.0	5.5	1.5	0.8	1.1	
2	13.1	10.1	11.6	10.9	9.8	10.3	7.9	4.3	5.4	0.9	-0.1	0.5	
3	16.4	13.1	14.9	10.1	8.7	9.5	9.8	7.3	9.0	0.3	-0.1	0.0	
4	17.1	14.8	15.9	9.3	8.2	8.8	8.6	7.2	7.6	0.8	0.0	0.3	
5	15.9	13.6	14.8	9.2	8.1	8.7	7.7	6.6	7.3	1.0	0.1	0.4	
6	15.5	12.6	14.0	8.3	6.8	7.5	7.0	6.1	6.6	1.0	0.3	0.6	
7	15.8	14.0	14.7	7.2	5.6	6.5	6.6	5.9	6.2	1.4	0.5	0.9	
8	14.4	12.6	13.5	8.8	5.8	7.3	6.4	5.6	5.9	1.3	0.2	0.9	
9	14.7	13.3	13.9	10.2	6.9	8.6	5.8	3.8	5.1	0.8	0.0	0.3	
10	15.5	13.7	14.9	11.0	9.0	10.0	5.7	4.6	5.4	0.6	-0.2	0.2	
11	13.8	11.7	12.8	10.6	9.2	10.0	4.6	3.6	4.1	0.8	0.1	0.5	
12	12.4	10.7	11.4	9.2	8.0	8.6	4.0	3.4	3.6	1.2	0.3	0.7	
13	12.8	11.0	11.8	9.1	7.8	8.4	4.1	3.2	3.6	1.1	0.1	0.6	
14	11.6	9.8	10.8	10.2	9.1	9.6	4.5	4.0	4.2	1.3	0.3	0.8	
15	10.7	8.2	9.5	11.9	10.2	11.0	4.7	4.1	4.4	1.7	0.5	1.1	
16	8.4	7.5	8.0	11.1	9.6	10.4	4.1	3.1	3.6	2.1	1.3	1.6	
17	9.0	8.0	8.5	9.7	8.1	9.1	3.2	2.4	2.8	1.5	1.0	1.3	
18	8.8	8.2	8.5	8.5	7.0	7.8	2.9	2.0	2.4	2.4	1.4	1.8	
19	9.5	7.0	8.2	9.8	7.9	8.7	2.5	1.6	2.2	2.0	1.5	1.8	
20	10.5	7.3	8.8	11.0	9.6	10.3	2.3	1.5	1.9	2.1	1.3	1.7	
21	11.7	9.5	10.5	9.6	8.5	8.9	1.9	0.9	1.4	2.2	1.0	1.5	
22	13.0	10.3	11.5	8.6	7.7	8.2	1.1	0.0	0.7	2.4	1.2	1.7	
23	12.3	10.8	11.6	8.3	7.8	8.1	0.5	-0.1	0.1	2.0	0.9	1.5	
24	13.3	10.6	11.6	9.6	8.3	8.8	1.0	-0.1	0.4	2.0	0.9	1.4	
25	13.2	11.6	12.5	9.0	8.8	8.8	1.3	0.4	0.9	3.8	2.0	2.9	
26	11.6	10.1	10.9	10.0	8.9	9.3	1.8	1.0	1.3	2.6	2.3	2.4	
27	10.9	10.0	10.4	9.4	7.2	8.5	1.8	1.3	1.5	2.5	2.2	2.3	
28	11.5	10.9	11.2	7.3	6.4	6.8	1.6	1.1	1.4	2.7	1.8	2.3	
29	12.2	10.8	11.5	6.9	5.7	6.4	1.1	0.6	0.8	2.1	1.4	1.7	
30	12.1	11.6	11.8	7.1	6.2	6.8	0.9	0.3	0.6	1.8	1.3	1.5	
31	13.1	11.6	12.1	---	---	---	1.1	0.3	0.8	1.9	1.0	1.4	
Month	17.1	7.0	11.7	13.1	5.6	8.8	9.8	-0.1	3.4	3.8	-0.2	1.2	

01382500 PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, NJ—Continued
TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
February				March				April				May
1	2.1	1.1	1.5	3.5	1.0	2.0	---	---	---	17.8	13.4	15.4
2	2.1	1.2	1.6	3.0	1.1	2.0	---	---	---	19.7	15.7	17.7
3	2.6	1.5	1.9	2.7	1.5	2.1	---	---	---	19.1	17.6	18.2
4	2.3	1.1	1.6	3.8	1.6	2.5	---	---	---	19.1	16.9	17.9
5	2.2	1.2	1.6	4.0	1.7	2.6	---	---	---	19.7	16.5	18.1
6	1.7	0.8	1.3	4.2	1.1	2.4	---	---	---	19.5	17.1	18.3
7	1.8	0.2	0.9	4.7	1.5	2.8	---	---	---	18.9	16.1	17.5
8	1.9	0.4	1.0	5.0	2.0	3.1	---	---	---	18.8	16.1	17.5
9	2.6	0.8	1.7	4.8	2.3	3.2	15.4	12.7	14.0	16.1	13.2	14.2
10	2.0	0.7	1.3	4.0	2.4	3.1	14.0	12.1	12.9	14.3	11.7	13.1
11	2.4	1.2	1.7	4.1	2.9	3.3	14.8	12.2	13.3	13.3	11.6	12.3
12	2.4	0.9	1.5	3.3	3.1	3.2	14.4	11.8	12.9	12.4	11.1	11.5
13	1.9	0.8	1.2	---	---	3.2	13.5	12.3	12.7	14.8	10.5	12.4
14	2.3	0.6	1.3	---	---	---	14.6	11.3	12.8	17.1	13.3	15.0
15	2.3	0.6	1.5	---	---	---	15.0	12.3	13.4	17.1	14.8	16.0
16	1.7	0.9	1.3	---	---	---	14.9	12.3	13.4	16.5	14.0	15.1
17	1.9	0.6	1.2	---	---	---	13.4	12.0	12.8	16.1	13.5	14.9
18	2.0	1.1	1.5	---	---	---	13.6	11.3	12.2	15.3	12.7	14.0
19	2.3	1.0	1.6	---	---	---	13.7	11.0	12.1	15.3	12.6	13.8
20	2.6	1.0	1.8	---	---	---	14.7	11.0	12.6	19.1	15.1	16.9
21	2.7	0.9	1.9	---	---	---	15.4	12.7	14.0	20.0	17.1	18.7
22	2.4	0.8	1.6	---	---	---	15.7	13.1	14.4	19.2	17.3	18.1
23	2.1	0.9	1.4	---	---	---	15.2	12.0	13.6	17.8	16.5	17.1
24	2.9	0.7	2.0	---	---	---	15.4	11.6	13.5	17.8	16.2	17.0
25	2.2	0.6	1.6	---	---	---	14.6	12.2	13.2	20.3	16.7	18.4
26	2.4	0.6	1.7	---	---	---	12.8	12.0	12.4	22.0	17.6	19.7
27	2.6	1.7	2.1	---	---	---	13.1	11.9	12.4	20.4	18.7	19.6
28	2.4	1.3	1.8	---	---	---	12.3	11.4	11.9	18.7	17.2	18.1
29	---	---	---	---	---	---	13.5	10.8	12.1	19.9	17.4	18.6
30	---	---	---	---	---	---	15.2	11.5	13.2	21.6	18.2	19.8
31	---	---	---	---	---	---	---	---	---	21.3	18.6	20.1
Month	2.9	0.2	1.5	---	---	---	---	---	---	22.0	10.5	16.6

01382500 PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, NJ—Continued
TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	22.0	19.6	20.8	20.6	17.8	19.3	22.0	20.4	21.1	21.2	17.3	18.9
2	22.2	19.5	21.0	21.1	17.2	19.2	23.2	20.2	21.6	20.0	16.6	18.3
3	22.8	20.0	21.4	22.3	17.8	19.9	23.3	21.3	22.3	18.5	16.7	17.2
4	23.1	20.8	22.1	23.4	19.1	21.1	24.5	22.0	23.2	18.1	15.3	16.6
5	23.3	21.3	22.3	24.0	20.0	21.9	25.5	22.9	24.1	16.9	14.0	15.4
6	23.1	21.3	22.3	24.9	20.9	22.9	24.7	22.6	23.7	16.5	13.0	14.8
7	21.3	18.7	20.0	25.1	21.7	23.4	23.5	20.6	22.1	18.0	14.0	15.8
8	19.9	17.4	18.7	23.8	22.0	22.9	23.9	20.9	22.4	18.7	15.3	16.7
9	18.7	16.8	17.2	23.9	21.6	22.7	24.8	22.1	23.4	16.6	14.4	15.2
10	19.3	16.5	17.7	22.9	21.6	22.0	24.9	23.2	24.1	15.9	13.6	14.7
11	18.9	17.3	18.2	24.2	20.6	22.2	25.5	23.0	24.2	16.9	13.1	14.7
12	19.8	17.4	18.5	24.1	20.8	22.4	24.6	21.9	23.1	15.0	13.5	13.9
13	19.9	18.9	19.4	22.7	21.3	21.9	23.3	21.1	22.1	15.9	13.1	14.2
14	19.9	18.5	19.2	21.7	21.1	21.4	22.7	20.9	21.8	16.4	13.3	14.7
15	21.1	18.2	19.7	23.7	20.7	22.1	21.6	20.6	20.9	15.0	12.5	13.8
16	20.1	18.1	18.8	25.3	21.6	23.2	22.9	20.6	21.6	13.8	11.9	13.1
17	20.3	18.5	19.3	25.4	22.3	23.7	24.4	21.9	23.1	15.9	13.3	14.4
18	21.2	17.7	19.4	25.4	22.1	23.6	23.3	21.6	22.5	14.8	13.1	14.0
19	21.9	18.3	20.1	24.5	21.4	23.0	23.9	20.6	22.3	15.8	12.8	14.3
20	22.3	19.9	21.1	23.6	21.8	22.8	23.9	15.7	21.5	16.0	13.4	14.7
21	23.0	19.7	21.3	24.4	21.6	22.9	15.7	12.1	13.7	14.7	12.0	13.4
22	21.7	19.8	20.7	24.6	21.6	23.1	18.1	14.0	15.5	16.3	12.7	14.3
23	23.1	19.6	21.2	23.0	21.3	21.9	18.1	16.0	17.2	18.2	14.8	16.4
24	23.7	20.8	22.3	25.0	21.7	23.1	18.2	17.3	17.8	20.6	16.8	18.5
25	23.4	20.8	22.2	24.6	22.9	23.7	19.0	17.9	18.3	21.6	18.4	19.8
26	23.2	20.3	21.8	23.9	21.1	22.5	21.6	18.6	19.8	19.4	17.0	18.2
27	22.8	20.5	21.6	24.3	20.6	22.4	21.1	18.1	19.5	18.1	16.9	17.4
28	23.6	21.2	22.5	24.0	21.1	22.6	20.7	17.0	18.8	20.0	17.9	19.0
29	23.5	21.3	22.3	24.9	22.3	23.4	22.0	17.2	19.3	20.6	17.4	19.0
30	21.8	18.9	20.6	23.6	20.9	22.4	20.9	16.2	18.9	19.5	17.9	18.5
31	---	---	---	23.0	20.1	21.7	18.8	13.7	16.2	---	---	---
Month	23.7	16.5	20.5	25.4	17.2	22.3	25.5	12.1	20.8	21.6	11.9	16.0

01382500 PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, NJ—Continued